

## Operating Instructions

COMPACT  
**disc**  
DIGITAL AUDIO

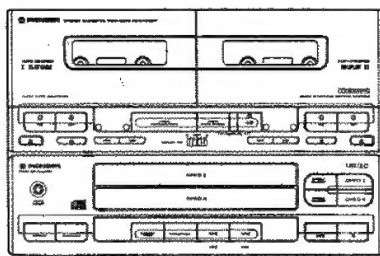


CASSETTE DECK TWIN CD

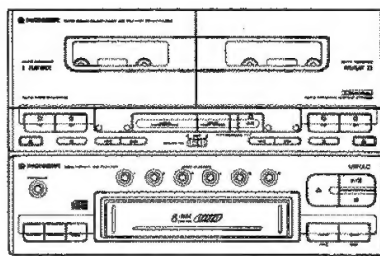
# PDC-P520T

CASSETTE DECK MULTI CD

# PDC-P520M



PDC-P520T



PDC-P520M

Thank you for buying this Pioneer product.  
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

### Power supply


The power of the cassette deck TWIN or MULTI-PLAY CD is supplied only when the stereo receiver is connected with the flat cable. Refer to "CONNECTIONS" in the operating instructions supplied with the stereo receiver.

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

### IMPORTANT NOTICE

#### [For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure place for future reference.

The Magazine Type Multi-Play CD Players with  mark and the Magazines with the same mark are compatible for 5-inch (12cm) discs.

#### [For Canadian model]

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**ATTENTION:** POUR PREVENIR LES CHOCES ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

## [FOR U.K. MODELS]

### CAUTION

This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.

Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: rear of the unit

CLASS 1  
LASER PRODUCT

VRW-328

## [For Canadian model]

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

*"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."*

## [FOR U.S. MODEL]

### CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

## INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the US Government Printing Office, Washington, D.C., 20402. Stock No. 004-000-00346-4.

*The above instructions apply only to units which will be operated in the United States.*

## CONTENTS

CAUTIONS REGARDING HANDLING .....	3
NAMES AND FUNCTIONS OF PARTS .....	4
CAUTIONS REGARDING COMPACT DISC HANDLING .....	6
PDC-P520T CD Player Section	
LISTENING TO COMPACT DISCS .....	7
To play a compact disc .....	7
To remove a disc .....	7
Time display .....	8
VARIOUS OPERATIONS .....	8
To begin playback from a particular disc .....	8
Track search-To search for a particular track .....	8
Manual search-To search for a particular passage .....	9
Hi-Lite Scan - To search by playing a portion of each track .....	9
To repeat playback (repeat play) .....	10
Random playback-To play all tracks in random order .....	10
Changing discs for continuous play (auto-eject play) .....	10
TO PLAY ONLY DESIRED TRACKS/DISCS .....	11
Program playback-To program tracks in desired order .....	11
Programming a pause .....	11
To clear all of the program contents .....	11
PDC-P520M CD Player Section	
INSERT DISCS INTO THE MAGAZINE .....	12
LISTENING TO COMPACT DISCS .....	13
To play a compact disc .....	13
To stop playback and take out the magazine .....	13
Time display .....	14
VARIOUS OPERATIONS .....	14
Disc search - To search for a particular disc .....	14
Track search-To search for a particular track .....	14
Manual search-To search for a particular passage .....	15
To repeat playback (repeat play) .....	15
Random playback-To play all tracks in random order .....	15
Hi-Lite Scan - To search by playing a portion of each track .....	15
TO PLAY ONLY DESIRED TRACKS/DISCS .....	16
Program playback-To program tracks/discs in desired order .....	16
Programming a pause .....	17
To clear all of the program contents .....	17
HOW TO HANDLE CASSETTE TAPES .....	18
PLAYING TAPES .....	19
Basic operation .....	19
Music search - Skipping forward or backward to play back a desired selection .....	20
Relay playback .....	20
RECORDING .....	21
Recording on tape .....	21
Copying a tape .....	22
To erase the contents of a tape .....	22
A.S.E.S. (Auto Synchro Editing System) .....	23
MAINTENANCE .....	25
TROUBLESHOOTING .....	26
SPECIFICATIONS .....	27

## CAUTIONS REGARDING HANDLING

### Location

**Install the unit in a well-ventilated location where it will not be exposed to high temperature or humidity.**

Do not install the unit in a location which is exposed to direct rays of the sun, or near stoves or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may also result in malfunction or accident. (Avoid installation near cookers, etc., where the unit may be exposed to smoke from oil, steam or heat.)



### Precautions regarding installation

- Placing and using the unit for long periods on heat-generating sources will affect performance. Avoid placing the unit on heat-generating sources.
- Install the unit as far away as possible from your TV. Installation in close proximity to such equipment may cause noise or degradation of the picture.
- Such noise may be particularly noticeable when an indoor antenna is used. In such cases, make use of an outdoor antenna, or turn off the power to the unit.
- Please place this unit on a level surface.

### Condensation

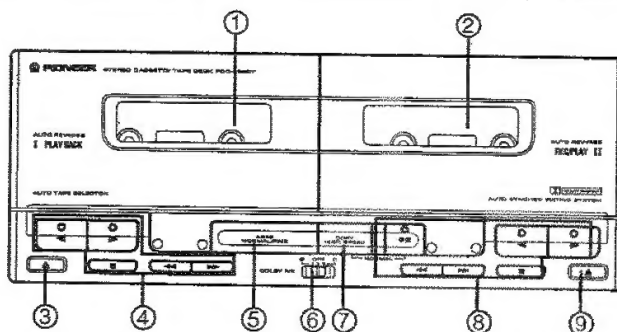
When this unit is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside, and the unit may not be able to attain its full performance. If this occurs, allow the unit to stand for about an hour or raise the room temperature gradually.



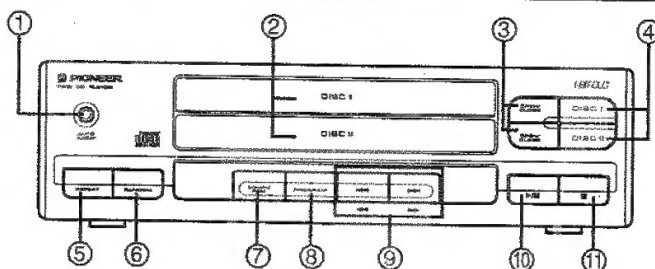
# NAMES AND FUNCTIONS OF PARTS

## PDC-P520T

### TAPE DECK



### CD PLAYER




### TAPE DECK

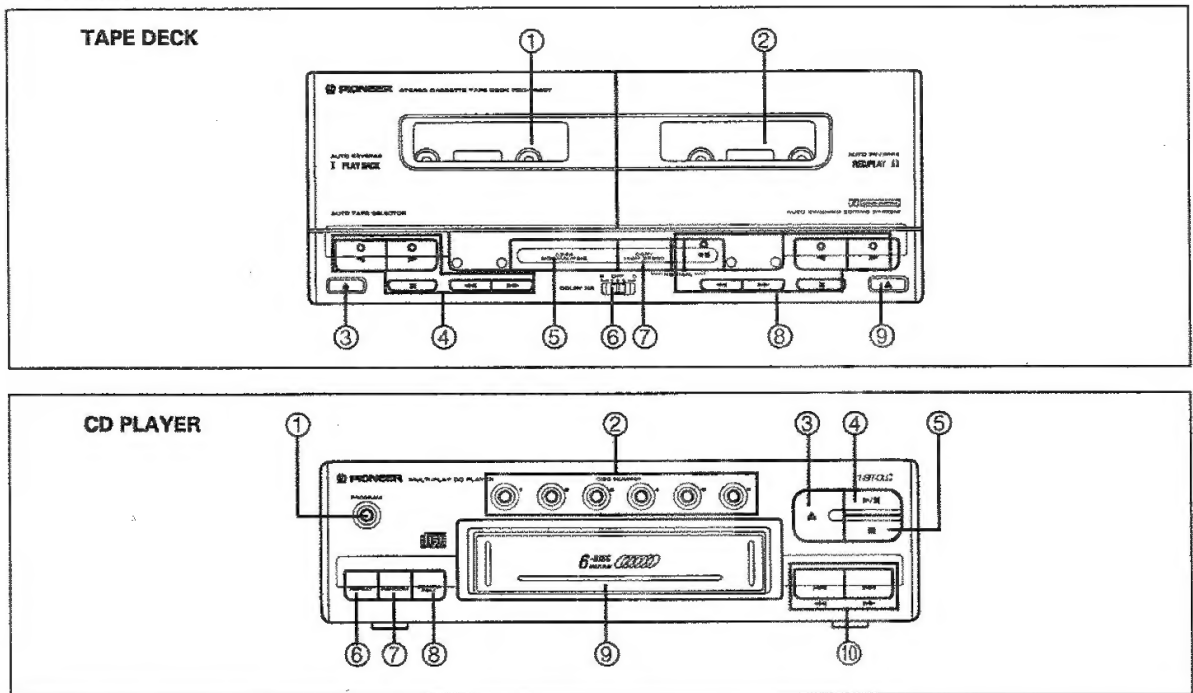
- ① Deck I cassette door
- ② Deck II cassette door
- ③ Deck I eject button (▲) (p. 19)
- ④ Deck I operation buttons (Play ◀▶, Stop ■, Fast ◀◀▶▶) (p. 19)
- ⑤ ASES (Auto Synchro Editing System) NORMAL/FINE button (p. 23, 24)
- ⑥ DOLBY\* NR switch (p. 19)
- ⑦ COPY HIGH SPEED/NORMAL button (p. 22)
- ⑧ Deck II operation buttons (Play ◀▶, Stop ■, Fast ◀◀▶▶, Rec Pause ●||) (p. 19, 20, 21)
- ⑨ Deck II eject button (▲) (p. 19, 21)

### CD PLAYER

- ① AUTO EJECT button (p. 10)
- ② Disc trays (DISC I, DISC II)
- ③ OPEN/CLOSE buttons (p. 7)
- ④ Disc select buttons (DISC I, DISC II) (p. 8)
- ⑤ REPEAT button (p. 10)
- ⑥ RANDOM button (p. 10)
- ⑦ COMPU PGM button (p. 24)
- ⑧ PROGRAM button (p. 11)
- ⑨ Manual/Track search buttons (◀◀/▶▶, ▶▶/▶▶) (p. 8, 9)
- ⑩ Play/Pause button (▶/||) (p. 7)
- ⑪ Stop button (■) (p. 7)

\* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

PDC-P520M




TAPE DECK

- ① Deck I cassette door
- ② Deck II cassette door
- ③ Deck I eject button (▲) (p. 19)
- ④ Deck I operation buttons  
(Play ◀▶, Stop ■, Fast ◀◀▶▶) (p. 19)
- ⑤ ASES (Auto Synchro Editing System)  
NORMAL/FINE button (p. 23, 24)
- ⑥ DOLBY\* NR switch (p. 19)
- ⑦ COPY HIGH SPEED/NORMAL button (p. 22)
- ⑧ Deck II operation buttons  
(Play ◀▶, Stop ■, Fast ◀◀▶▶, Rec Pause ● II) (p. 19, 20, 21)
- ⑨ Deck II eject button (▲) (p. 19, 21)

CD PLAYER

- ① PROGRAM button (p. 16)
- ② DISC NUMBER buttons (1 – 6) (p. 14)
- ③ Eject button (▲) (p. 13)
- ④ Play/Pause button (▶/II) (p. 13)
- ⑤ Stop button (■) (p. 13)
- ⑥ REPEAT button (p. 15)
- ⑦ RANDOM button (p. 15)
- ⑧ COMPU PGM button (p. 24)
- ⑨ Magazine insertion slot
- ⑩ Manual/Track search buttons (◀◀/◀, ▶/▶▶) (p. 14, 15)

\* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

## CAUTIONS REGARDING COMPACT DISC HANDLING

### CARE OF DISCS

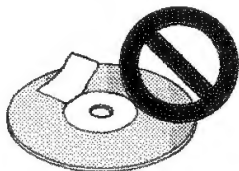
- With this player, use discs which display the mark shown below. (Optical audio digital discs.)



- When holding discs, do not touch their signal surfaces (the side reflecting a "rainbow" pattern, opposite the label side). Hold by the edges, or by one edge and the center hole.



- Do not affix gummed labels or tape to the label surfaces. Also, do not scratch or damage the label.



- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.

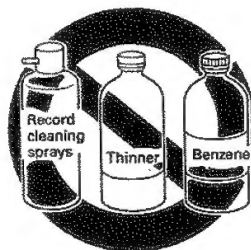


### CLEANING DISCS

- Fingerprints or smudges on the surface of a disc will not directly affect the recorded signals, but depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.

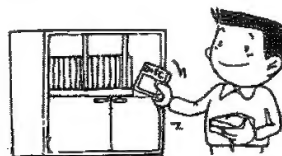


- If a disc becomes very dirty, dip a soft cloth in water, and after wringing it out well, wipe the dirt away gently. Remove any water drops with another soft, dry cloth.
- Do not use record cleaning sprays or anti-static agents on discs. Never clean discs with benzene, thinner, or other volatile solvents, since damage to the disc surface may result.



### STORING DISCS

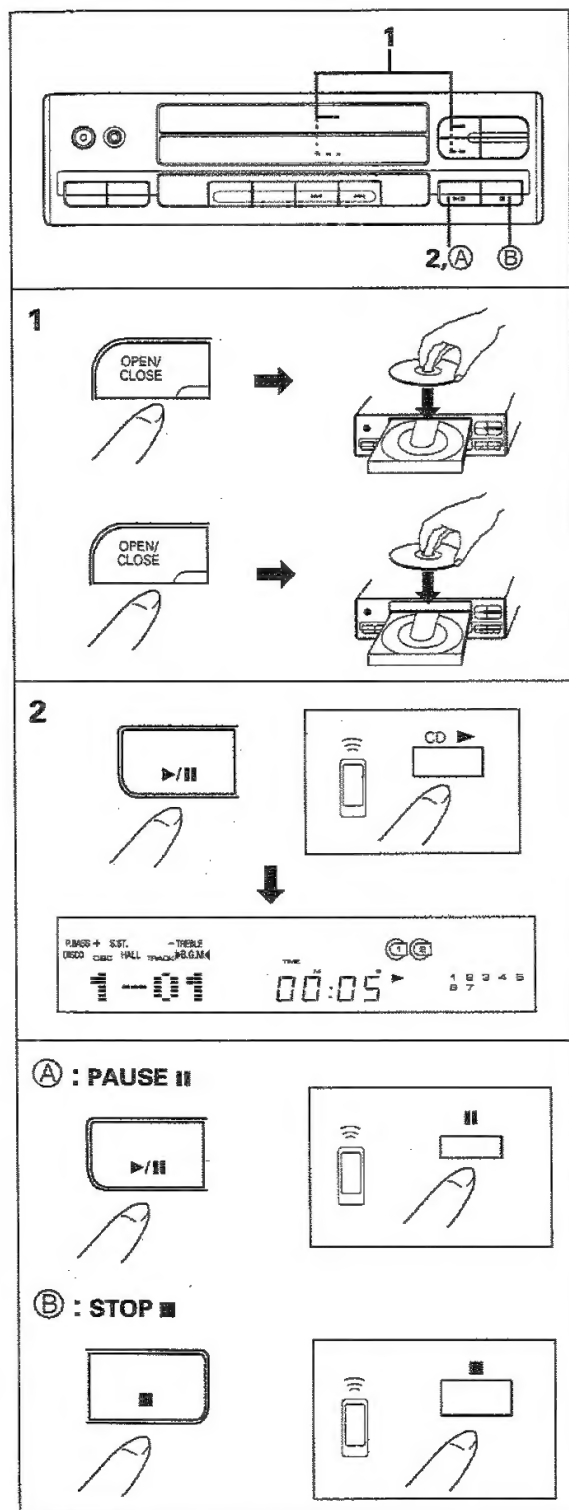
- Discs are made of the same kinds of plastic used for conventional analog audio records. Be careful not to allow discs to warp; always store discs in their cases vertically, avoiding locations with high heat or humidity, or extremely low temperatures. Avoid leaving discs in cars, since the seat of a car in direct sunlight can become extremely hot.
- Always read and abide by the precautionary notes listed on disc labels.



### CD LENS CLEANER

The player's pickup lens should not become dirty in normal use, but if for some reason it should malfunction due to soiling, consult your nearest PIONEER authorized service center. Lens cleaners for CD players are commercially available, but special care should be exercised in their use since some may cause damage to the lens.

## LISTENING TO COMPACT DISCS (PDC-P520T)



### To play a compact disc

**1 Press OPEN/CLOSE (I or II) and load a disc with the label surface facing up.**

**2 Press >|| or || to start playback.**

Playback will start from DISC I.

To begin playback from DISC II, press DISC II.

**A To pause playback temporarily:**

Press >|| or ||.

Pressing >|| or || again resumes playback from the position where pause mode was entered.

**B To stop playback:**

Press ■.

### CAUTION:

- When setting an 8 cm (3 in.) CD single, do not use the 8 cm (3 in.) CD single adaptor.
- Be sure to insert discs with the label surface facing up.
- Do not touch the disc's signal surface (the side reflecting a "rainbow" pattern, opposite the label side).
- Never attempt to load both 8 cm (3 in.) and 12 cm (5 in.) discs together, since disc damage or other malfunctions may result. Always load only one disc at a time.
- Place 8 cm (3 in.) disc or 12 cm (5 in.) on the disc table in the groove corresponding to the size of the disc.

### NOTE:

If the function is switched during CD playback, the CD player enters stop mode automatically.

### To remove a disc

1. Press OPEN /CLOSE (I or II) to open the disc tray.
2. Remove the disc and return it to its protective case.
3. Press OPEN/CLOSE (I or II) to close the disc tray.

### Caution:

Do not unplug the power cord during playback, as this could result in damage to the disc.

### BEFORE TRANSPORTING THE CD PLAYER AGAIN

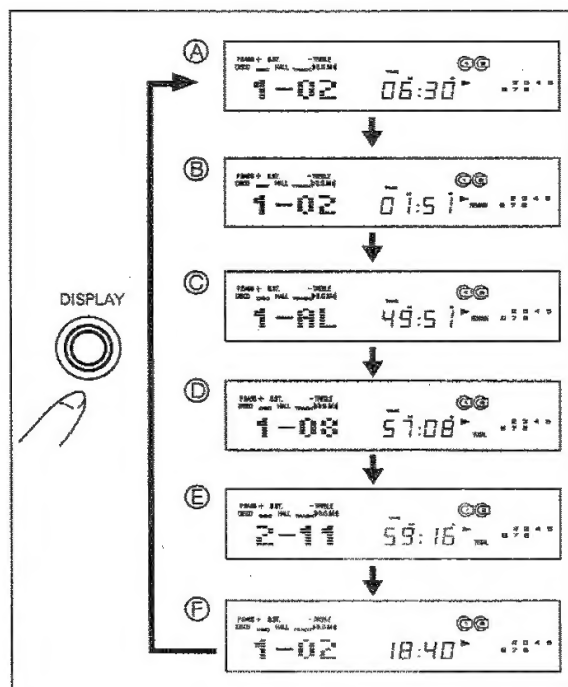
- ① Turn on the power, and press the OPEN/CLOSE II to open the disc tray II.
- ② Press OPEN/CLOSE II to close the disc tray II and confirm that the display window shows "2-01" → "2-00".
- ③ Turn the power off.

### NOTE:

Always remove discs when moving the unit.

Operations indicated by the [ ] mark are performed with the remote control unit.

## LISTENING TO COMPACT DISCS (PDC-P520T)



### Time display

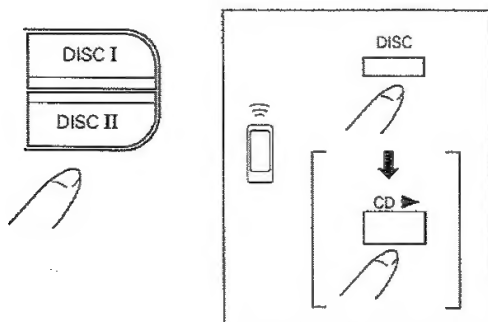
During playback, pressing the DISPLAY button on the stereo receiver changes the time display in the following sequence:  
 (A) TIME (elapsed playback time of the track being played) → (B) REMAIN (remaining playback time of the track being played) → (C) ALL REMAIN (remaining playback time from the playing point to the end of the disc) → (D) DISC I TOTAL (total number of tracks and total playback time of the disc I) → (E) DISC II TOTAL (total number of tracks and total playback time of the disc II) → (F) Current time.

- With track No. 18 or above, REMAIN time (B) cannot be displayed.
- During Program playback, the remaining time of all programmed tracks can be displayed with the ALL REMAIN (C) setting. The total time of the programmed tracks can be displayed with the TOTAL setting (D, E).
- If track No. 18 or more is programmed or the total playback time exceeds 100 minutes, ALL REMAIN time (C) and TOTAL time (D, E) cannot be displayed.
- During random playback, ALL REMAIN time (C) cannot be displayed.
- During recording a CD on Deck II, elapsed recording time will be displayed after the current time (F).

## VARIOUS OPERATIONS (PDC-P520T)

### To begin playback from a particular disc

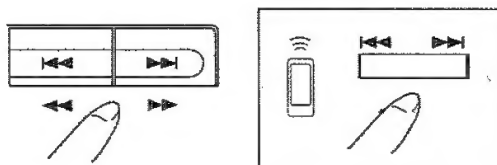
During playback or stop mode



Playback starts from the beginning of the specified disc. With the remote control unit, each time DISC is pressed the disc No. changes. In stop mode, press CD to start playback.

### Track search - To search for a particular track

During normal playback, stop mode, pause mode or program playback



When >>>/>>> is pressed once or a number of times, playback is advanced to the beginning of a track located after the track being played. The position of the located track corresponds to the number of times the button is pressed.

When <<</<<< is pressed once, playback returns to the beginning of the track being played. When this button is pressed more than once, playback is returned to a track located before the track being played. The position of the located track corresponds to the number of times the button is pressed.

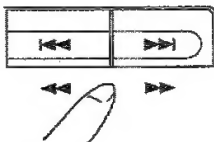
#### NOTE:

During program playback, Track Search can be carried out in the programmed order.



**Manual search - To search for a particular passage**

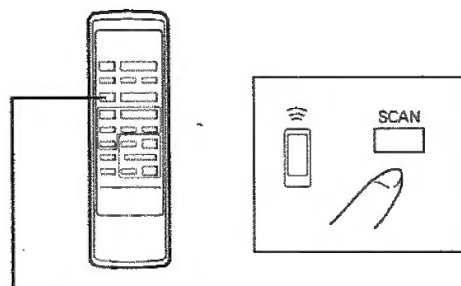
During playback or pause mode



While **▶▶▶▶** is kept pressed, playback rapidly advances toward the end of the disc. When playback reaches the end of the disc, the player enters pause mode and "End" is displayed. While **◀◀◀◀** is kept pressed, playback rapidly reverses toward the beginning of the disc. When the desired passage is reached, release **▶▶▶▶** or **◀◀◀◀**. The player enters the original mode (playback or pause) where **▶▶▶▶** or **◀◀◀◀** is released.

- During program playback, Manual Search can be carried out in one program step only. When playback reaches the beginning of the track, the player enters pause mode. To resume playback, press **▶/||** or **CD ▶**.
- The remote control unit's track search buttons (**◀◀▶▶**) cannot be used for performing manual search.

**Hi-Lite Scan - To search by playing a portion of each track**



**SCAN button**

**During stop mode:**

When SCAN on the remote control unit is pressed, playback starts from a point 1 minute after the beginning of the track, and each track is played for about 10 seconds.

**During playback mode:**

When SCAN is pressed, the player memorizes the time of the current point and playback starts from the memorized time; each track is played for about 10 seconds.

**To exit Hi-Lite Scan mode**

Press **■** or **CD ▶**. When **CD ▶** is pressed, normal playback starts from the current point.

**NOTES:**

- Hi-Lite Scan is possible when the unit is in CD mode.
- When the playback time of a track is less than one minute or is shorter than the memorized time, Hi-Lite Scan playback is carried out from the beginning of the track for about 10 seconds.
- During program playback or random playback, pressing SCAN cancels program playback or random playback. The player memorizes the time of the point at which SCAN was pressed and Hi-Lite Scan playback is carried out from the memorized time on each track. However, the program contents will not be erased.

## VARIOUS OPERATIONS (PDC-P520T)

### To repeat playback (repeat play)

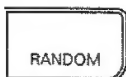


The REPEAT button can be pressed in any playback mode. To repeatedly play all tracks on the disc in normal playback mode or in the specified playback mode (Program playback or Random playback), press REPEAT. The REP indicator lights.

If you want to repeat one track, program a track and press REPEAT.

- To exit repeat mode, press REPEAT so that the REP indicator goes off.

### Random playback - To play all tracks in random order



Press RANDOM.

The RND indicator lights and all tracks on all discs are played in random order.

After all tracks are played, the player enters stop mode.

- To stop random playback, press CD Stop (■).

#### NOTE:

- Programmed tracks cannot be played in random order. If RANDOM is pressed during program playback, the program contents will be erased.

### Changing discs for continuous play (auto-eject play)



#### Auto-eject play:

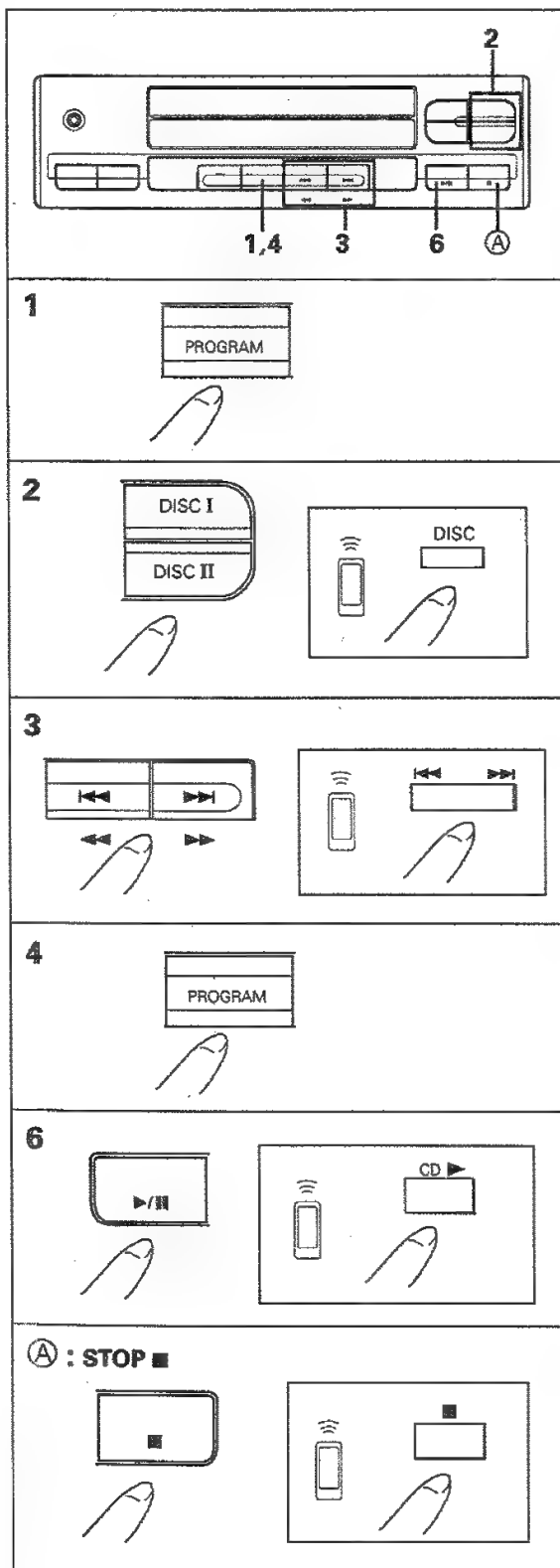
Press AUTO EJECT.

When a disc completes its playback, the disc tray will open automatically, and the other disc will begin playback.

#### NOTES:

- Auto-eject play and repeat play cannot be performed at the same time.
- Auto-eject play cannot be applied to the programmed tracks.

## TO PLAY ONLY DESIRED TRACKS/DISCS (PDC-P520T)



### Program playback - To program tracks in desired order

- 1 During stop mode, press PROGRAM.**
  - PGM indicator lights.
- 2 Press DISC I or DISC II to designate which disc is to be played back.**
- 3 Press ◀◀/◀◀ or ▶▶/▶▶ so that the desired track number appears on the display.**
- 4 Press PROGRAM.**
- 5 Repeat steps 2 through 4 for other tracks to be programmed.**
  - Up to 24 steps can be programmed.
- 6 Press ▶/II or CD ▶.**

The tracks are played in the programmed order. When all programmed tracks have been played, the player enters stop mode.

#### (A) To stop Program playback, press ■.

- To go to the previous or next step in a program, press ◀◀/◀◀ or ▶▶/▶▶.
- Each time a selection is programmed, the display will show the programmed number.
- If PROGRAM is pressed during playback, the PGM indicator lights but programming cannot be carried out.

### Programming a pause

Inserting ■ pause in your program can be very useful when carrying out recording. Press ■ instead of entering a track number. "PA" appears on the display panel.

- For example, when recording on both sides of a cassette tape, if you program a pause after the last track to be recorded on the first side, program playback will pause at that point to allow you to switch tape sides. To resume program playback after the player enters pause mode, press ▶/II or ■.

#### NOTES:

- A pause cannot be programmed at the beginning of a program, nor can two pauses be programmed one after the other.
- A pause inserted in a program is counted as one step.
- If a pause is programmed as the last step of a program, the player will not enter pause mode.

### To clear all of the program contents

#### During stop mode:

Press ■ or OPEN/CLOSE.

#### During playback mode:

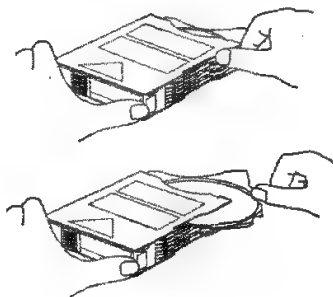
Press ■ twice or OPEN/CLOSE once.

#### NOTE:

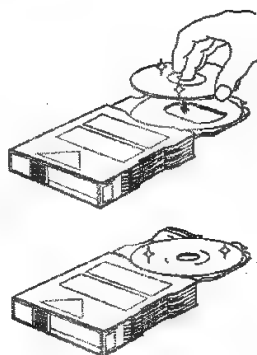
Opening the disc tray I, program contents for DISC I will be cleared.  
Opening the disc tray II, program contents for DISC II will be cleared.

## INSERT DISCS INTO THE MAGAZINE (PDC-P520M)

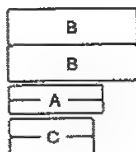
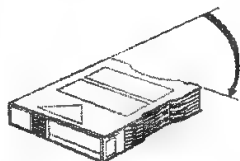
1



2



3



Insert any discs which you may have into the supplied magazine. Up to six discs may be inserted. The numbering of the discs begins with 1 at the topmost tray, and then increases in order downwards to 6 for the lowest tray. The magazine has a window through which the pulled-out disc tray can be checked. Even during playback, the number of the disc being played back can be checked through this window.

1. Pull out only one disc tray.
2. Position discs with the label side downward.
3. Put the disc tray back as it was originally.
4. Insert other discs by repeating steps 1 to 3.

### CAUTION:

- Please make sure you only pull out one disc tray at a time. (When a disc tray has been pulled out, do not pull out other disc trays.)
- If discs are inserted label side upward, it will not be possible for them to be played. Please make sure you insert them with the label side downward.
- Objects other than discs (song cards, explanations of disc contents, etc.), must never be inserted into the disc trays.
- Do not touch the playing surface of discs (iridescent side) with hands or fingers.

### AFFIXING LABELS TO THE MAGAZINE

- Always attach the labels provided in the designated locations. Correct operation may not be possible if labels or tape are attached in other locations.
- The following are convenient ways of using labels:
  - A: For titles
  - B: For disc names
  - C: For classification
- Do not attach labels on top of other labels.

Additional magazines identical to the one supplied are available as options (\*JD-M100, JD-M200, JD-M300, JD-M108, JD-M308).

Please use them to make your own disc library, with separate magazines for each artist or genre.

\* JD-M100, JD-M200, JD-M300 ... Magazine for 12-cm discs  
 JD-M108, JD-M308 ..... Magazine for 8-cm discs

### NOTE:

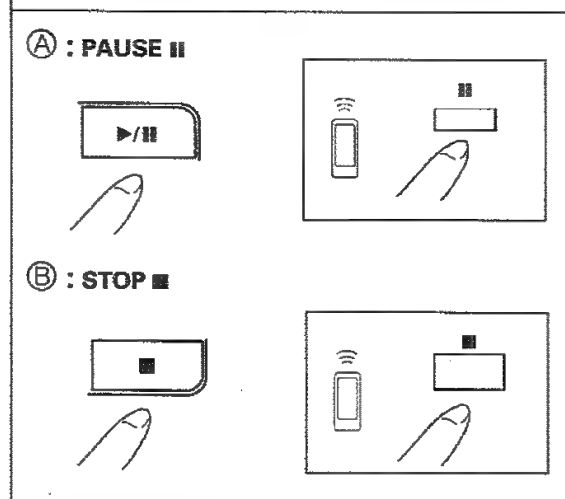
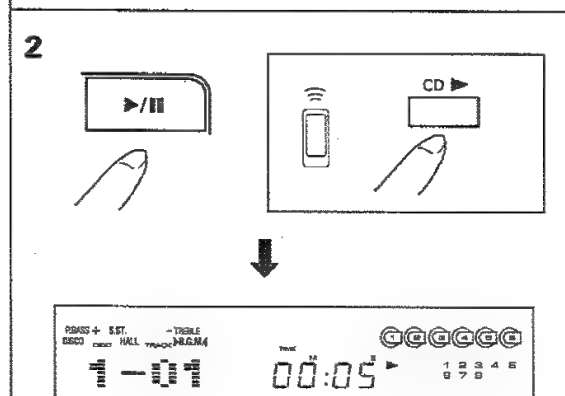
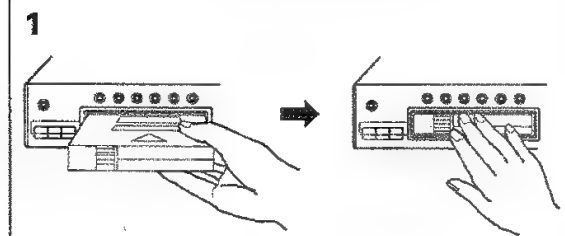
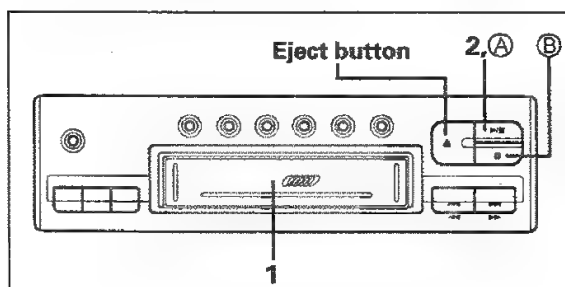
Both 12-cm discs and 8-cm discs cannot be installed together in a magazine.

### For U.S. customers only

You may purchase additional Pioneer six-compact-disc magazines from your dealer. If however, they are not available at your dealer in the United States, you may order from:

PIONEER ELECTRONICS SERVICE, INC.  
 2265 East 220th Street  
 P.O. Box 1760, Long Beach  
 CA. 90801-1760  
U.S.A.  
 Phone #(800)421-1404

# LISTENING TO COMPACT DISCS (PDC-P520M)



Operations indicated by the [ ] mark are performed with the remote control unit.

## To play a compact disc

- 1 Insert a magazine, pushing it in until a click sound is heard.
- 2 Press ►/|| or CD ► to start playback.

### A To pause playback temporarily:

Press ►/|| or ||.

Pressing ►/|| or || again resumes playback from the position where pause mode was entered.

### B To stop playback:

Press ■.

- If the function is switched during CD playback, the CD player enters stop mode automatically.

## NOTES:

- In order to play an 8-cm (3 in.) CD you will need a special Multi-Play Magazine (JD-M108 or JD-M308) which is sold separately. Be sure to read thoroughly the Operating Instructions before using it.
- 8-cm (3 in.) CD Adaptors  
It is possible that even an adaptor which meets recommended standard CD specifications will not be usable with the CD player. It is recommended that the special Multi-Play Magazine (JD-M108 or JD-M308) be used.
- Never load an 8-cm (3 in.) CD or its adaptor into a standard 12-cm (5 in.) magazine. This may seriously damage the CD player.

## To stop playback and take out the magazine

Press the eject (▲) button and remove the magazine.

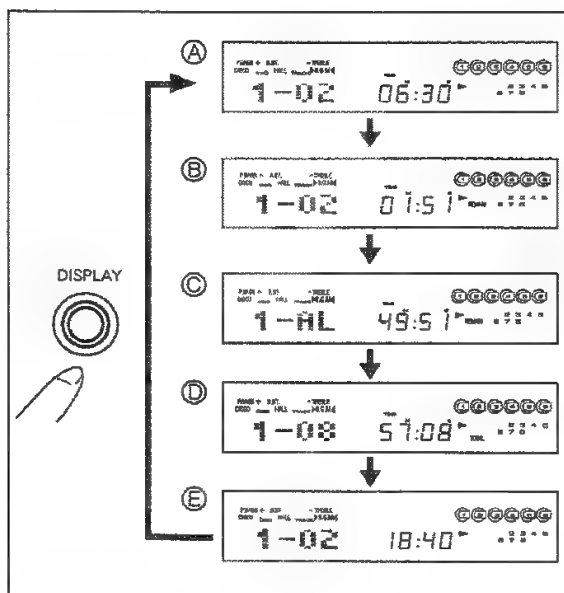
## Cautions regarding handling of magazines

- When inserting a magazine into the player, make sure that the direction of insertion is correct.
- After use, store in the case provided. Do not place in locations subjected to high temperatures or exposed to direct sunlight.
- Do not take magazines apart.
- Be careful not to drop, or hit magazines against things. Also do not apply strong force to trays which have been withdrawn.
- Application of benzine, thinner, insecticide or other volatile liquids to a magazine may damage the surface, so keep magazines away from such substances.

## Caution:

Do not unplug the power cord during playback, as this could result in damage to the disc.

## LISTENING TO COMPACT DISCS (PDC-P520M)



### Time display

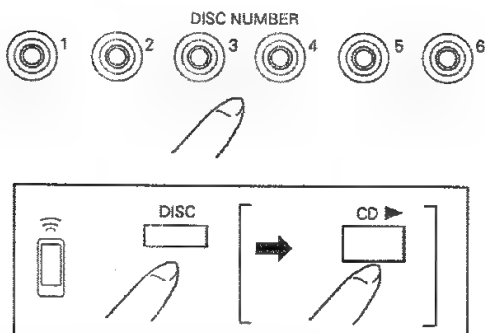
During playback, pressing the DISPLAY button on the stereo receiver changes the time display in the following sequence:

- With track No. 24 or above, REMAIN time ② cannot be displayed.
- During program playback or random playback, ALL REMAIN time ③ cannot be displayed.
- During program playback, the number of program steps can be displayed with the TOTAL setting ④.
- During recording of a CD on Deck II, elapsed recording time will be displayed after the current time ⑤.

## VARIOUS OPERATIONS (PDC-P520M)

### Disc search - To search for a particular disc

During playback or stop mode



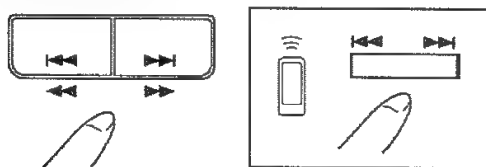
The player searches for the specified disc and playback starts from the beginning of that disc. With the remote control unit, each time DISC is pressed the disc No. changes. In stop mode, press CD ► to start playback.

#### NOTE:

If the disc number of a tray which does not contain a disc (disc symbol indicator is not lit) is selected, playback cannot start from that disc number.

### Track search - To search for a particular track

During normal playback, stop mode, pause mode or program playback



When ►►► is pressed once or a number of times, playback is advanced to the beginning of a track located after the track being played. The position of the located track corresponds to the number of times the button is pressed.

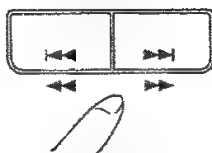
When ◀◀◀ is pressed once, playback returns to the beginning of the track being played. When this button is pressed more than once, playback is returned to a track located before the track being played. The position of the located track corresponds to the number of times the button is pressed.

#### NOTES:

- During normal playback, Track Search can be carried out on one disc only.
- During program playback, Track Search can be carried out in the programmed order.

### Manual search - To search for a particular passage

During playback or pause mode

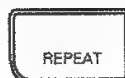


While ►►►► is kept pressed, playback rapidly advances toward the end of the disc. When playback reaches the end of the disc, the player enters pause mode and "End" is displayed. While ◀◀◀◀ is kept pressed, playback rapidly reverses toward the beginning of the disc. When the desired passage is reached, release ►►►► or ◀◀◀◀. The player enters the original mode (playback or pause) where ►►►► or ◀◀◀◀ is released.

#### NOTES:

- During normal playback, Manual Search can be carried out on one disc only.
- During program playback, Manual Search can be carried out in one program step only. When playback reaches the beginning of the track, the player enters pause mode. To resume playback, press ►/|| or CD ►.
- The remote control unit's track search buttons (◀◀, ►►) cannot be used for performing manual search.

### To repeat playback (repeat play)



The REPEAT button can be pressed in any playback mode. To repeatedly play all tracks on the disc in normal playback mode or in the specified playback mode (Program playback or Random playback), press REPEAT. The REP indicator lights.

- If you want to repeat one track, program a track and press REPEAT.
- To exit repeat mode, press REPEAT so that the REP indicator goes off.

### Random playback - To play all tracks in random order



Press RANDOM.

The RND indicator lights and all tracks on all discs are played in random order.

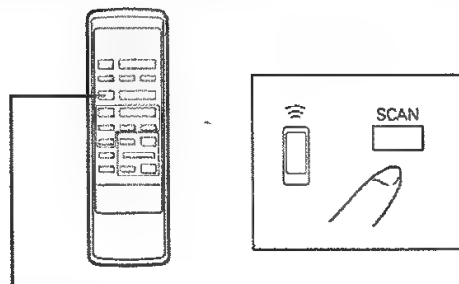
After all tracks are played, the player enters stop mode.

- To stop random playback, press CD Stop (■).

#### NOTES:

- Programmed tracks cannot be played in random order.
- If RANDOM is pressed during program playback, the programmed contents will be erased.

### Hi-Lite Scan - To search by playing a portion of each track



SCAN button

#### Disc Hi-Lite Scan

When SCAN is pressed once during stop mode, playback starts from a point 1 minute after the beginning of the first track, and the first track of each disc is played for about 10 seconds. The disc No. flashes during Disc Hi-Lite Scan mode. After the first tracks of all discs are scanned, the player enters stop mode.

#### Track Hi-Lite Scan

When SCAN is pressed twice during stop mode, playback starts from a point 1 minute after the beginning of the track; each track is played for about 10 seconds. The track No. flashes during Track Hi-Lite Scan mode. After all tracks of all discs are scanned, the player enters stop mode.

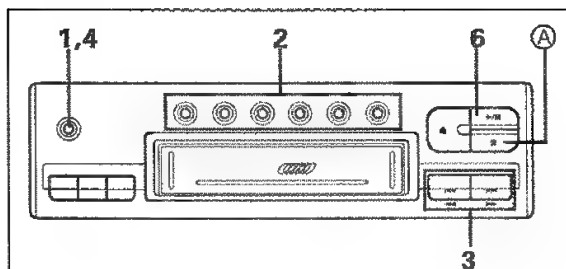
#### To exit Hi-Lite Scan mode

Press ■ or CD ►. When CD ► is pressed, normal playback starts from the current point.

#### NOTES:

- Hi-Lite Scan is possible when the unit is in CD mode.
- When SCAN is pressed once during normal playback mode or pause mode, the player memorizes the time of the current point and Track Hi-Lite Scan playback is carried out from the memorized time on each track. Each time SCAN is pressed, the mode switches between Disc Hi-Lite Scan and Track Hi-Lite Scan.
- When manual search is carried out, Hi-Lite Scan playback starts from the point at which ◀◀ or ►► is released.
- Hi-Lite Scan cannot be applied to the programmed tracks.

## TO PLAY ONLY DESIRED TRACKS/DISCS (PDC-P520M)



### Program playback - To program tracks/discs in desired order

#### 1 During stop mode, press **PROGRAM**.

- PGM indicator lights.

#### 2 Press the **DISC NUMBER** button which contains the track to be programmed.

To program entire discs, enter the desired disc numbers with the DISC NUMBER buttons and go to step 5.

- When DISC NUMBER is pressed, "AL" (all tracks) appears on the display.

#### 3 Press **◀◀◀** or **▶▶▶** so that the desired track number appears on the display.

#### 4 Press **PROGRAM**.

#### 5 Repeat steps 2 through 4 for other tracks to be programmed.

- Up to 32 steps can be programmed.

#### 6 Press **▶/II** or **CD ▶**.

The tracks are played in the programmed order. When all programmed tracks have been played, the player enters stop mode.

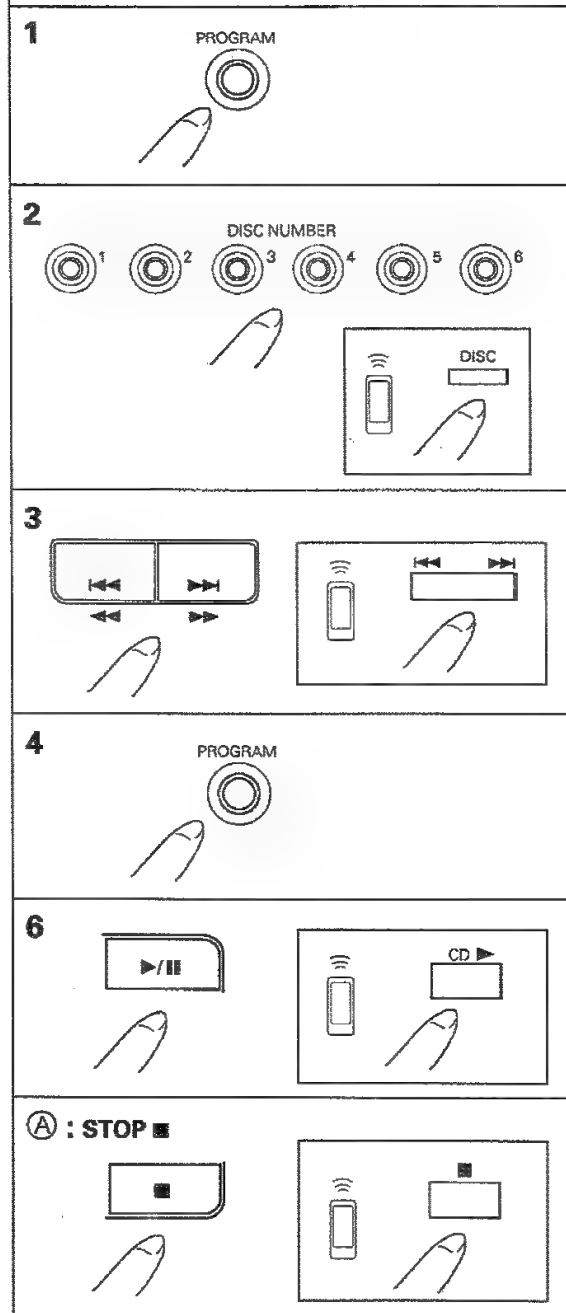
#### Ⓐ To stop Program playback, press **■**.

- To go to the previous or next step in a program, press **◀◀◀** or **▶▶▶**.
- Each time a selection is programmed, the display will show the programmed number.

### Direct program

During normal playback or Track Hi-Lite Scan playback, the track being played can be programmed.

1. During playback, press **PROGRAM**.
  2. Whenever **■** track to be programmed is played, press **PROGRAM**.
  3. After programming, press **▶/II**. The current playback is cleared and the tracks are played in the programmed order.
- Direct programming is not possible during program playback or random playback.





## Programming a pause

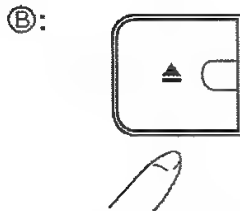
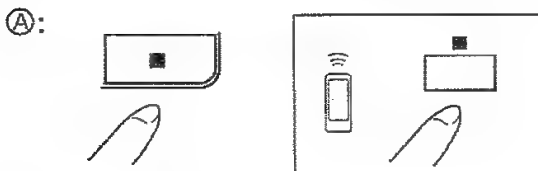
Inserting a pause in your program can be very useful when carrying out recording. Press **II** instead of entering a track number. "PA" appears on the display panel.

- For example, when recording on both sides of a cassette tape, if you program a pause after the last track to be recorded on the first side, program playback will pause at that point to allow you to switch tape sides. To resume program playback after the player enters pause mode, press **▶/II** or **III**.

### NOTES:

- A pause cannot be programmed at the beginning of a program, nor can two pauses be programmed one after the other.
- A pause inserted in a program is counted as one step.
- If a pause is programmed as the last step of a program, the player will not enter pause mode.

## To clear all of the program contents



- Ⓐ: During stop mode, press **■**.  
During playback, press **■** twice.
- Ⓑ: When the magazine is ejected, the program contents will be cleared.

## HOW TO HANDLE CASSETTE TAPES

### CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading a cassette tape.

#### Is the tape loose, or is some of the tape sticking out of the cassette?

If some of the tape is projecting outside the cassette shell or if the tape is loose, it may not feed between the capstan and pinch roller. This will prevent the tape from being transported or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack. (Fig. A) Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

#### How can you prevent accidental erasure?

A cassette is provided with accidental erasure prevention tabs so that important recordings will not be erased accidentally. When the tab (Fig. B) on the cassette shell is broken out with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the Rec Pause (● II) button, so valuable recordings will not be erased in error. To rerecord on a cassette whose tabs have been broken out, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.

In case of TYPE II (HIGH/CrO<sub>2</sub>) tape, take sufficient care that the detection hole is not blocked.

When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

#### NOTE:

The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.

### TIPS ON USING CASSETTE TAPES

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for approx. 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt or oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit. Use tapes of 90 minutes or less.

Fig. A

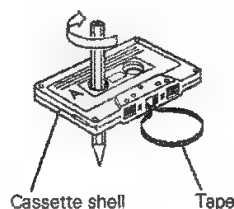


Fig. B

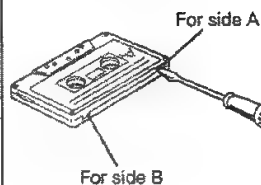
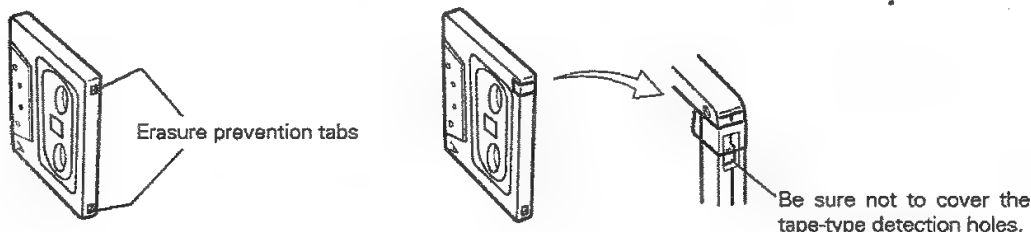


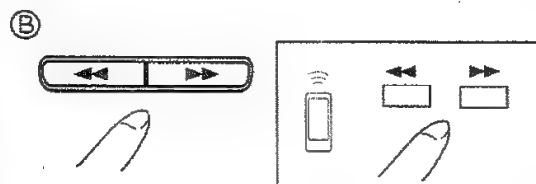
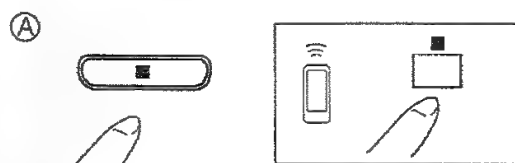
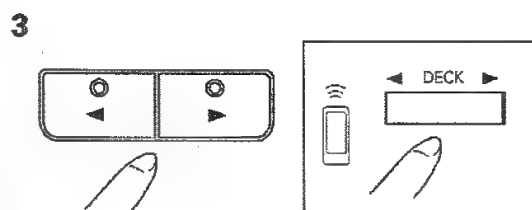
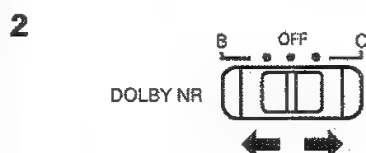
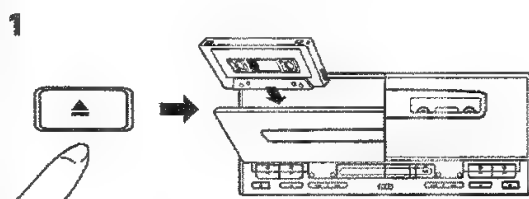
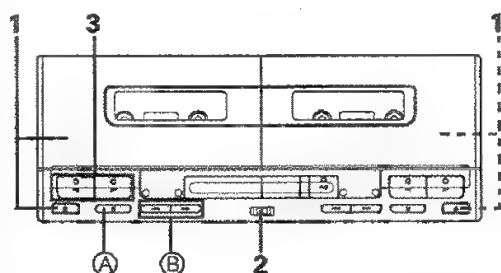
Fig. C

When you want to record again on a cassette with broken erasure prevention tabs, cover the tab sections with a double layer of adhesive tape or other tape.



With TYPE II (HIGH/Chrome) tape, be sure not to cover the tape-type detection holes. If they are covered, the auto tape selector function will not operate correctly.

## PLAYING TAPES



### Basic operation

- Tapes may be played back in Deck I or Deck II but not in both decks at the same time.

- 1 Press the eject ( ) button and load a recorded tape, then push in the cassette door until it locks.
- 2 Set the DOLBY NR switch to the same position used for recording.

Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on.

- 3 Press or to start playback.

: Forward playback

: Reverse playback

- A To stop playback, press .

- B To fast forward or rewind, press or .

- This deck automatically plays both sides of a tape.

To operate Deck II with the remote control unit, press the desired deck operation button while pressing SHIFT DECK II.

### NOTES:

- If the power is switched off while the tape is running, you may not be able to open the door. In this case, switch on the power again and press once more.
- Confirm that the deck has stopped before pressing .

### Auto Stop Mechanism

This mechanism automatically stops the tape when the end of the tape is reached during fast forward or reverse ( or ).

### The Dolby NR System

The Dolby NR system are designed to reduce high-frequency noise (tape hiss) generated during playback. The level of low-volume, high-frequency sounds is increased during recording and decreased by the same amount during playback to restore the original level. At the same time, high-frequency noise (the most easily perceived by the human ear) is attenuated as well.

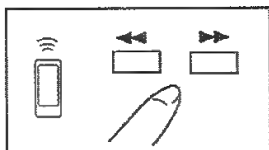
Dolby B-type NR system reduces high-frequency tape noise, widening the dynamic range.

Dolby C-type NR system is even more powerful, applying the noise reduction effect to a wider spectrum of frequencies from the middle range.

For playback always use the same Dolby NR setting that was used for recording.

Avoid playing back tapes recorded using the Dolby NR system with the DOLBY NR switch in the OFF position, or tapes recorded without Dolby NR system with the DOLBY NR switch in the ON position, since this does not allow faithful reproduction of the original sound.

During playback



## Music search - Skipping forward or backward to play back a desired selection

During forward playback (▶)

To listen to the next selection or beyond, press ▶▶ as many times as the number of selections to be skipped. To listen to the selection being currently played from the beginning, press ◀◀ once. To return to the previous selection or more, press ◀◀ as many times as the number of selections to be skipped plus one.

During reverse playback (◀)

To listen to the next selection or beyond, press ◀◀ as many times as the number of selections to be skipped. To listen to the selection being currently played from the beginning, press ▶▶ once. To return to the previous selection or more, press ▶▶ as many times as the number of selections to be skipped plus one.

### NOTES:

Music search functions by detecting blanks between selections. In the following cases, the music search may not function properly. This is not, however, a sign of unit malfunction.

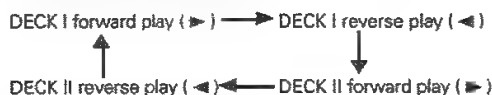
- When using a tape with blanks between selections less than 4 seconds long.
- When listening to tapes with long low-level parts, like classical music, or with sound breaks several seconds long within selections.
- When listening to recorded conferences or talk shows, where sound is interrupted.
- When using tapes with noise in the blanks between selections.
- When using a tape with low level passage (or low recording level passage) more than 4 seconds long within selection.
- When using a tape which contains a selection of which playback time is less than 30 seconds.

## Relay playback

- Relay playback is possible from Deck I to Deck II. When the tape in Deck I has been played, the tape in Deck II automatically starts playing.

- 1 Load recorded tapes in Deck I and Deck II.
- 2 Set the DOLBY NR switch to the same position used for recording.
- 3 Press ▶ or ◀ on Deck I.

- Relay playback is repeated as follows (32 sides maximum):

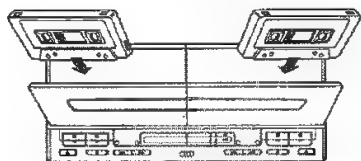


### To stop relay playback:

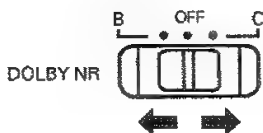
Press ■ of the operating deck.

- If there is a tape in only one deck, then that deck continuously plays both sides of the tape (16 sides maximum).

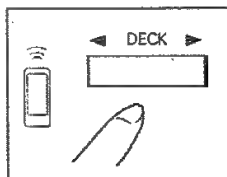
1



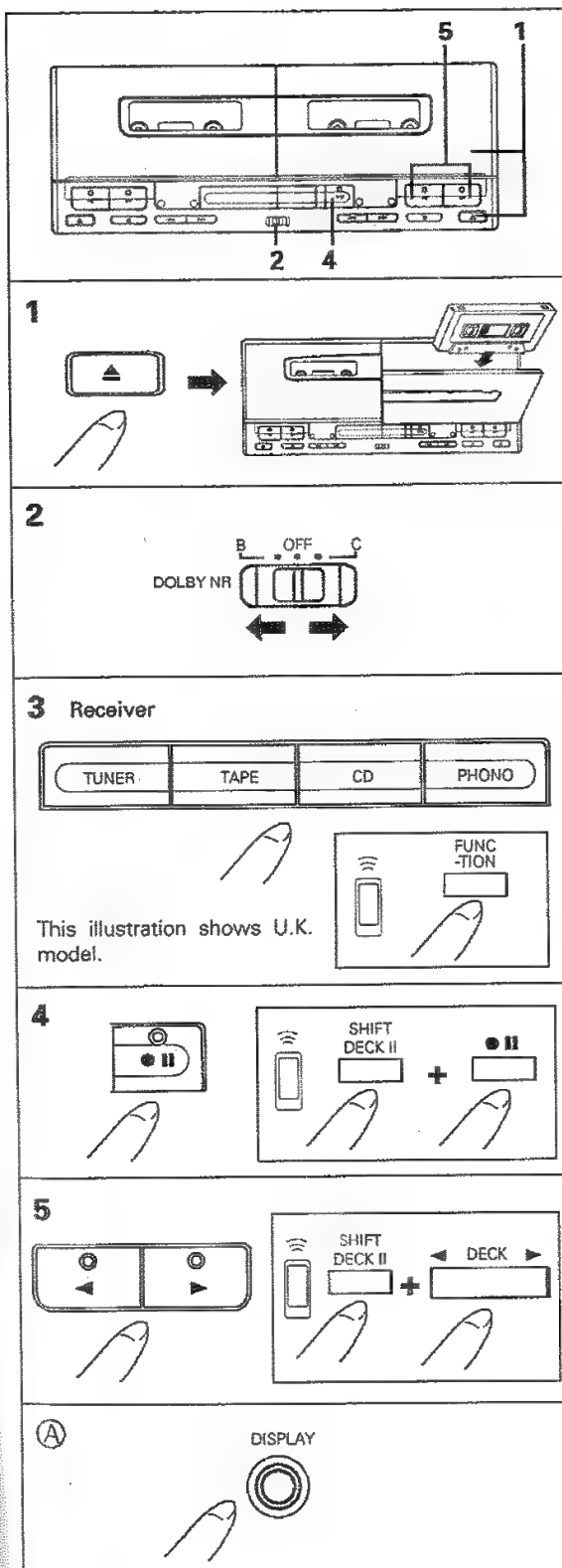
2



3



## RECORDING



### Recording on tape

- Material can be recorded on Deck II only. Recording is not possible on Deck I.
- This deck is equipped with an auto-reverse function, so if you record in the ► direction, when recording finishes in that direction it will automatically start recording in the ◄ direction. If you only want to record on one side of the tape, record in the ◄ direction, or break off the accidental erasure prevention tab on the side you don't want to record on.
- Use a TYPE I (Normal) or TYPE II (HIGH/CrO<sub>2</sub>) tape.

To operate Deck II with the remote control unit, press the desired deck operation button while pressing SHIFT DECK II.

- 1 Load the tape for recording into Deck II.**
  - Wind the tape forward past the leader to the start of the magnetic coated portion.
- 2 Set the DOLBY NR switch to the desired position.**
  - A tape recorded using the DOLBY NR system must be played back using the same system.
- 3 Select the program source to be recorded using the input selector buttons on the receiver.**
- 4 Press the Rec Pause (●||) button.**

The deck enters record-standby mode.
- 5 Press ► or ◄ to start recording.**
- 6 Play the program source to be recorded.**
  - The recording level is automatically adjusted.

#### To stop recording:

Press ■.

#### To stop recording temporarily:

Press the Rec Pause (●||) button. To resume recording, press ► or ◄.

#### Ⓐ To display elapsed recording time:

Each time DISPLAY on the stereo receiver is pressed, the display switches between current time and elapsed recording time.

When recording CD, the display shows time information described in "Time display" section (page 8 for PDC-P520T, page 14 for PDC-P520M).

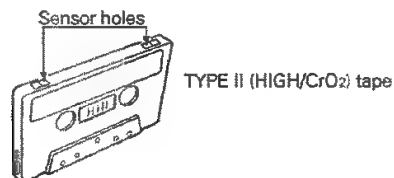
When recording radiobroadcast, the received frequency is displayed.

#### NOTES:

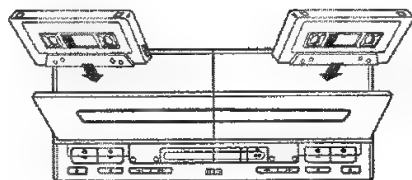
- The input selector cannot be switched during recording.
- During recording, you can operate the SOUND FIELD CONTROL buttons but the resulting sound is not recorded.

#### Automatic tape selector function

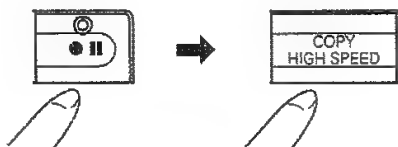
This unit (Deck I and Deck II) is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape recording bias and equalization.



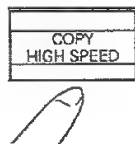
1



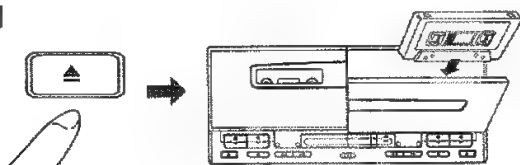
2 For normal speed copy



For high speed copy



1

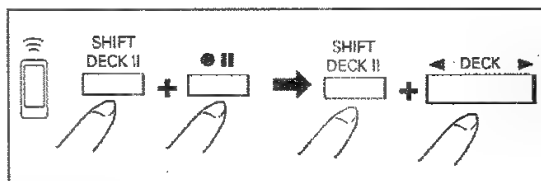
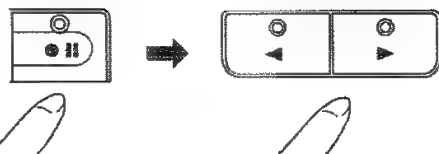


2 Receiver



This illustration shows U.K. model.

3



## Copying a tape

The contents of the tape in Deck I can be copied onto the tape in Deck II.

**1 Load the recorded tape into Deck I and the tape for recording into Deck II.**

- Wind the tape forward past the leader to the start of the magnetic coated portion.
- Tape copying should begin in the forward direction (▶).

**2 To start normal speed copy, press ●II and then press COPY HIGH SPEED.**

**To start high speed copy (about twice normal speed), press COPY HIGH SPEED.**

## To stop copying:

Press one of the ■ buttons. Both decks will stop simultaneously.

- If a tape recorded with the DOLBY NR system is copied, the copied tape will also be recorded automatically with the DOLBY NR system regardless of the setting of the DOLBY NR switch. If a tape recorded without the DOLBY NR system is copied, the copied tape will also be recorded automatically without the DOLBY NR system.
- To perform normal copying while listening to playback, set the input selector button on the receiver to TAPE and select the appropriate DOLBY NR switch position.
- The tape copy mode is canceled when the end of either of the tapes is reached, so it is advisable to use tapes of the same length.

## Note on High Speed Copy:

When performing High Speed Copy, an interference beep might be recorded if there is a TV nearby. In this case, use normal speed copy or turn the TV power off.

## To erase the contents of a tape

**1 Load the tape to be erased into Deck II.**

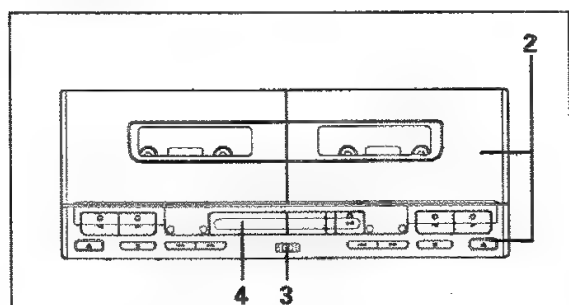
- Check to see that the accidental erasure prevention tab has not been broken off.

**2 Set the input selector button on the receiver to TAPE.**

**3 Press ●II and then press ▶ or ◀.**

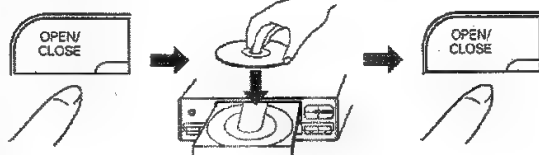
- While erasing, do not play back a tape on Deck I.

## NORMAL A.S.E.S.

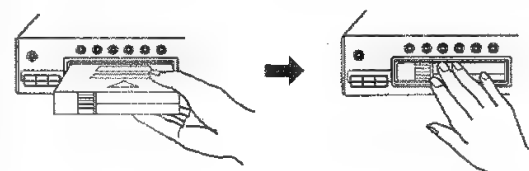


## 1 CD Player

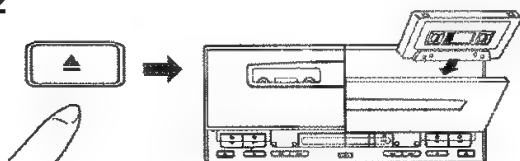
PDC-P520T



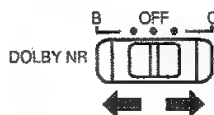
PDC-P520M



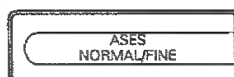
## 2



## 3



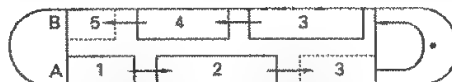
## 4



## A.S.E.S. (Auto Synchro Editing System)

For automatic recording of a CD to a cassette tape.

- A 10-second blank is recorded at the beginning of the tape automatically.
- Recording starts in the forward (▶) direction.
- When recording on both sides, and the tape ends in the middle of a track in the forward (▶) direction, recording starts from the beginning of the track when it continues in the reverse (◀) direction.



A, B: Indicates the side of the tape.

1 - 5: Indicates the number of the track.

\*: Indicates the leader part of the tape.

## NORMAL A.S.E.S.

- With this function, CD tracks are recorded in the order of the track numbers.

## 1 Load the CD.

When programming is performed, tracks will be played in the programmed order.

## 2 Load the tape for recording into Deck II.

## 3 Set the DOLBY NR switch to the desired position.

## 4 Press ASES NORMAL/FINE.

## To stop A.S.E.S. during recording:

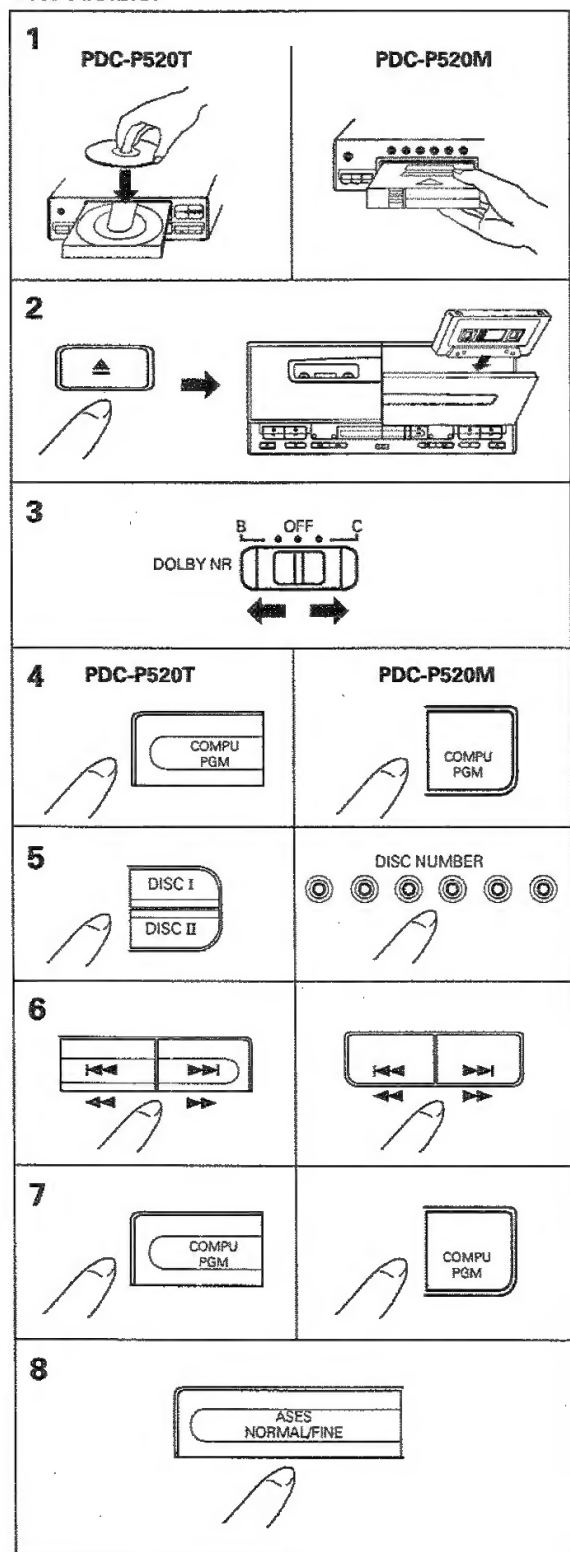
Press Deck II's stop button or press the CD stop button.

## Link mode (To resume recording with A.S.E.S.)

When the unit finishes A.S.E.S., another CD can be recorded with A.S.E.S. from that point.

In this case, press ■ on the Deck II after step 3 is finished and perform step 4.

## FINE A.S.E.S.



## FINE A.S.E.S.

With this function, the unit selects CD tracks so that their total playing time becomes the specified playing time as near as possible.

- Set input selector to CD.

- 1 Load the CD.**
- 2 Load the tape for recording into Deck II**
- 3 Set the DOLBY NR switch on the cassette deck to the desired position.**
- 4 Press COMPU PGM on the CD player.**
- 5 Select the disc No.**
- 6 Press  $\llcorner/\llcorner$  or  $\gg/\gg$  on the CD player so that the desired playing time appears on the display.**

Each time  $\gg/\gg$  is pressed, the time will be changed in the following sequence: 46  $\rightarrow$  54  $\rightarrow$  60  $\rightarrow$  74  $\rightarrow$  90 (minutes). With  $\llcorner/\llcorner$ , the time will be changed in the reverse direction.

- 7 Press COMPU PGM on the CD player.**  
The displayed time is memorized. The player now programs the tracks within the selected playing time for both sides of the tape. After the programming is completed, the display shows all of the programmed tracks and their playing time in the programmed order.
- 8 Press ASES NORMAL/FINE on the tape deck.**

## To stop A.S.E.S. during recording:

Press Deck II's stop button or press the CD stop button.

## NOTES:

- A.S.E.S. performs automatic recording from CD to tape, so do not attempt to perform manual operations during A.S.E.S. operation.
- A.S.E.S. may stop or operate incorrectly when there is a song change near the end of the tape. In such cases use manual operations to record the remaining songs.



## MAINTENANCE

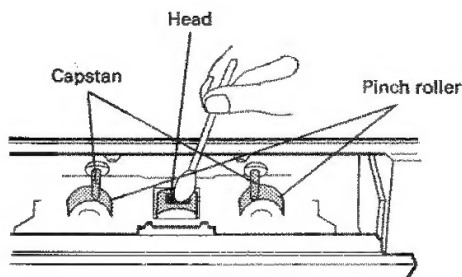
### Cleaning the head section

The heads, capstan and pinch roller are parts which are liable to become dirty quite easily. In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of sound quality. It is therefore recommended that the head section be cleaned regularly.

1. Turn the power off.
2. Press the eject (▲) button to open the cassette door.
3. Dip a cleaning swab into head cleaning fluid and use it to wipe the head, capstan, and pinch rollers. Wait 2-3 minutes until the cleaning fluid dries.

#### NOTE:

*This unit uses a head-slant standby system, with the result that the heads are mounted at an angled position.*



### Demagnetizing the cassette deck heads

The deck heads may become magnetized after the deck has been used for a long period of time, or if a magnet or other magnetized object (screwdriver, etc.) is brought near the heads. Magnetization of the heads results in increased noise and reduced ability to reproduce high-frequency sounds.

In this case, please use a commercially available head demagnetizer at regular intervals to eliminate the magnetic field on the heads. When using a head demagnetizer, turn stereo receiver's power switch OFF. In order to prevent adverse effects on the amplifier and speakers, however, be sure to turn down the amplifier's volume control to its lowest position, and disconnect any headphones from their headphones jack. For details, consult the instructions accompanying your head demagnetizer.

### Maintenance of external surfaces

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

## TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

### CD player

Symptom	Cause	Remedy
<b>When playback is started, it stops immediately. Pauses or stops during playback.</b>	<ul style="list-style-type: none"> <li>● Disc is loaded upside down.</li> <li>● Dirt, etc., on the disc.</li> </ul>	<ul style="list-style-type: none"> <li>● Load the disc correctly with the label side UP (PDC-P520T). Load the disc correctly with the label side DOWN (PDC-P520M).</li> <li>● Clean the dirt from the disc and then play it again.</li> </ul>
<b>No sound</b>	<ul style="list-style-type: none"> <li>● Player is in pause mode.</li> </ul>	<ul style="list-style-type: none"> <li>● Press the play (▶) or pause (⏸) button.</li> </ul>
<b>With certain discs, loud noise is produced, or play stops.</b>	<ul style="list-style-type: none"> <li>● Disc has bad scratch or warp.</li> <li>● Disc is extremely dirty.</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the disc.</li> <li>● Clean the disc.</li> </ul>

### Cassette deck

<b>Cassette door does not open. Cassette door does not close.</b>	<ul style="list-style-type: none"> <li>● Deck has not stopped.</li> <li>● Power was switched off while tape was running.</li> <li>● Cassette tape is incorrectly loaded.</li> </ul>	<ul style="list-style-type: none"> <li>● Press the stop (■) button.</li> <li>● Switch on power again.</li> <li>● Reload the cassette tape correctly.</li> </ul>
<b>Tape does not move.</b>	<ul style="list-style-type: none"> <li>● Deck is in pause mode.</li> <li>● Cassette inserted incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>● Press ●    or ▶.</li> <li>● Put cassette in holder properly.</li> </ul>
<b>No sound heard from tape.</b>	<ul style="list-style-type: none"> <li>● Function not set to TAPE.</li> <li>● Playing unrecorded tape.</li> </ul>	<ul style="list-style-type: none"> <li>● Set to TAPE.</li> <li>● Play a recorded tape.</li> </ul>
<b>Cannot record.</b>	<ul style="list-style-type: none"> <li>● Erasure prevention tabs are broken off.</li> <li>● Dirty head.</li> </ul>	<ul style="list-style-type: none"> <li>● Apply adhesive tape over tab holes.</li> <li>● Clean head.</li> </ul>
<b>Previously recorded sounds remain.</b>	<ul style="list-style-type: none"> <li>● Dirty head.</li> </ul>	<ul style="list-style-type: none"> <li>● Clean head.</li> </ul>
<b>Cannot copy tape.</b>	<ul style="list-style-type: none"> <li>● One deck has no tape loaded.</li> <li>● Tape in Deck II has erasure prevention tabs broken off.</li> </ul>	<ul style="list-style-type: none"> <li>● Load tapes in both decks.</li> <li>● Use cassette that can be recorded on, or apply adhesive tape over tab holes.</li> </ul>
<b>Sound is muffled and unclear.</b>	<ul style="list-style-type: none"> <li>● Dirty head.</li> <li>● DOLBY NR system is ON when listening to a tape recorded without DOLBY NR.</li> </ul>	<ul style="list-style-type: none"> <li>● Clean head.</li> <li>● Use same noise reduction system for playback as for recording. (Do not play tapes recorded with different NR systems.)</li> </ul>
<b>Treble tones too strong.</b>	<ul style="list-style-type: none"> <li>● Tape recorded with DOLBY NR but played without.</li> </ul>	<ul style="list-style-type: none"> <li>● Play in same condition as recording. (Turn on DOLBY NR switch for tapes recorded with DOLBY NR.)</li> </ul>

## SPECIFICATIONS

### PDC-P520T

#### Cassette Deck Section

Systems .....	4 track, 2-channel stereo
Heads .....	Recording/playback head x 1 Playback head x 1 Erasing head x 1
Motor .....	DC servo motor x 2
Wow and Flutter .....	No more than 0.09 % (WRMS)
Rewind/Fast Forward Time .....	Approximately 120 seconds (C-60 tape)
Frequency Response (-20 dB recording):	
TYPE II (HIGH/CrO <sub>2</sub> ) tape .....	35 Hz to 15,000 Hz $\pm$ 6 dB
TYPE I (Normal) tape .....	35 Hz to 14,000 Hz $\pm$ 6 dB
Signal-to-Noise Ratio .....	56 dB (peak recording level, audible compensation)
With Dolby NR type B ON .....	More than 10 dB (at 5 kHz)
With Dolby NR type C ON .....	More than 19 dB (at 5 kHz)

#### CD Section

Type .....	Compact disc digital audio system
Frequency Response .....	2 Hz to 20 kHz
Signal to Noise Ratio .....	96 dB or more (EIAJ)
Dynamic Range .....	90 dB or more (EIAJ)
Wow and Flutter .....	Limit of measurement ( $\pm$ 0.001% W.PEAK) or less (EIAJ)

#### Miscellaneous

Dimensions .....	260 (W) x 180 (H) x 273 (D) mm
Weight (without package) .....	3.9 kg

#### Accessories

Operating Instructions .....	1
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### PDC-P520M

#### Cassette Deck Section

Systems .....	4 track, 2-channel stereo
Heads .....	Recording/playback head x 1 Playback head x 1 Erasing head x 1
Motor .....	DC servo motor x 2
Wow and Flutter .....	No more than 0.09 % (WRMS)
Rewind/Fast Forward Time .....	Approximately 120 seconds (C-60 tape)
Frequency Response (-20 dB recording):	
TYPE II (HIGH/CrO <sub>2</sub> ) tape .....	35 Hz to 15,000 Hz $\pm$ 6 dB
TYPE I (Normal) tape .....	35 Hz to 14,000 Hz $\pm$ 6 dB
Signal-to-Noise Ratio .....	56 dB (peak recording level, audible compensation)
With Dolby NR type B ON .....	More than 10 dB (at 5 kHz)
With Dolby NR type C ON .....	More than 19 dB (at 5 kHz)

#### CD Section

Type .....	Compact disc digital audio system
Frequency Response .....	2 Hz to 20 kHz
Signal to Noise Ratio .....	96 dB or more (EIAJ)
Dynamic Range .....	90 dB or more (EIAJ)
Wow and Flutter .....	Limit of measurement ( $\pm$ 0.001% W.PEAK) or less (EIAJ)

#### Miscellaneous

Dimensions .....	260 (W) x 180 (H) x 273 (D) mm 10-1/4 (W) x 7-1/16 (H) x 10-3/4 (D) in.
Weight (without package) .....	4.3 kg (9 lb 7 oz)

#### Accessories

6-compact disc magazine .....	1
Operating Instructions .....	1

#### NOTE:

*Specifications and design subject to possible modification without notice due to improvements.*